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EXAMINER
CHAMPAGNE, LUNA

ART UNIT	PAPER NUMBER
3627	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/643,648	JEON, DONG-HYUN
Office Action Summary	Examiner	Art Unit	
	LUNA CHAMPAGNE	3627	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _12 October 2007_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-11_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-11_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Applicant's arguments received on October 12, 2007 are acknowledged. Claims 1-11
are presented for examination.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Hughes (5,809,143), in view of Sherman et al. (6,725,318 B1), in further view of Shino
(5,296,692).

Re claims 1 and 2, Hughes disclose an electronic settlement system using a
keyboard having multiple card identification (*Magnetic Card Reader, Smart Card I/F*)
and charging functions (*secure financial transaction*) for on-line electronic commerce
via an electronic commerce server which provides sales information of an item *(host -
see e.g. col. 3, lines 40-45 and fig. 1)* and a financial settlement institute server which
conducts financial settlements (*banking system 190 - see e.g. col. 7, lines 56-57); the*
electronic settlement system comprising: an electronic cash management server for
charging a smart card and an RF card through a fund transfer or a cash service under
an interlock with the financial settlement institute server (*the order data and the credit
card, debit card or a smart card information are sent via modem 44 to secure host 188.
Next, the secure host sends the card information and the PIN to the banking system*

190); a keyboard adapt – the banking system makes payment to the merchant's account – See e.g. col. 8, lines 24-39); a keyboard adapted to read the information from a magnetic card through a magnetic card identification section formed on one side (See e.g. col. 5, lines 2-5) and read/write the information from a smart card and an RF card through a smart card identification/charging section and an RF card identification/charging section formed on another side; (See e.g. col. 5, lines 28-33 - information sent to the host); and then transmitting the card information to the electronic cash management server or the financial settlement institute server in accordance with a control program (see e.g. col. 5, lines 28-33 - information sent to the host/electronic cash management server) and for transmitting the data from the electronic cash management server or the financial settlement institute server to the keyboard (see e.g. col. 6, lines 53-55 – the receipt can be sent to a printer via printer port 33 on secure keyboard 10); a control unit configured to transform the data read from the magnetic card, the smart card or the RF card into a machine language code for transmission to the user PC and to interpret a machine language code received from the user PC (see e.g. col. 4, lines 10-17; fig. 1 ; see also fig. 2 and col. 3, lines 11-14);

Hughes also discloses an electronic settlement system wherein the keyboard comprises: a magnetic card identification section to read a magnetic card; a smart card identification/charging section to read/write a smart card (see e.g. col. 5, lines 2-5); a USB up/down stream port to transmit the card information, which has been transformed into a machine language code by the control unit, to the user PC and transmit the data

received via the user PC from the electronic cash management server or the financial settlement server to the control unit (*interface 31).*

Hughes did not explicitly disclose a user PC for receiving the card information from the keyboard via a USB port.

However, Sherman et al. disclose a user PC for receiving the card information from the keyboard via a USB port *(See e.g. Abstract - a keyboard selectively operable to convey data to and from a host or personal computer (PC) through a universal serial bus (USB) port).*

Therefore, it would have been obvious at the time of the invention to a person of ordinary skill in the art to modify Hughes, by implementing a user PC for receiving the card information from the keyboard via a USB port, as taught by Sherman et al., in order to facilitate connection since USB-enabled peripheral devices can be chained together and also their connection to the port will be recognized by several operating systems without the need to reboot the computer.

Hughes, in view of Sherman et al., does not specifically disclose an RF card identification/charging section to read/write an RF card.

However, Shino discloses an RF card identification/charging section to read/write an RF card *(RF cards and IC cards are sometimes used interchangeably-see e.g. col. 8, lines 8-13).*

Therefore, it would have been obvious at the time of the invention to a person of ordinary skill in the art to modify Hughes, in view of Sherman et al., by implementing a RF card identification/charging section to read/write an RF card in the system, as taught

by Shino, in order to make the system more convenient to users through the use of different types of devices.

Re claims 3 and 4, Hughes disclose an electronic settlement system, wherein the keyboard further comprises a receipt printer output section to output the service particulars of the magnetic card settled via the electronic commerce server under an interlock with the control unit; wherein the receipt printer output section is connected to an external printer *(printer 14)* for receipt printing via an output port *(port 33)* formed on a side of the keyboard and a connection cable *(see e.g. col. 4, lines 10-17; fig. 1)*.

Re claims 5 and 6, Hughes disclose an electronic settlement system, wherein the external printer for receipt printing further comprises a separate input port for a releasable interlock with the output port of the keyboard; wherein the receipt printer output section can output the service particulars of the magnetic card under an interlock with an internal printer for receipt printing housed within the keyboard *(see e.g. fig. 11, printers 14 and 19)*.

Re claim 7, Hughes disclose an electronic settlement system, wherein the user PC comprises: a transmission/reception section interlocked with the electronic cash management server; the financial settlement institute server and the electronic commerce server via a web server *(see e.g. fig. 11)*; a microprocessor having a decoder and an encoder (*Encrypter 40*) to interpret the machine language code received under

an interlock with the control unit of the keyboard for providing the transmission/reception

section with a control signal and transform the data received from the electronic cash

management server, the financial settlement institute server and the electronic

commerce server via the transmission/reception server into a machine language code

for transmitting it to the control unit of the keyboard *(see e.g. col. 4, lines 14-17)*; a

memory unit for storing a control program to write the smart card and the RF card in a

fund transfer or a magnetic card cash service type according to the control of the

microprocessor under an interlock with the electronic cash management server *(*

interface 36 - see e.g. col. 3, lines 63-67; col. 4, lines 1-2); a USB port for

transmission/reception of data under an interlock with the USB up/down stream port of

the keyboard according to the control of the microprocessor *(interface 31)*.

3.   Claims 8, 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Hughes (5,809,143), in view of Shino (5,296,692).

        Re claim 8, Hughes disclose a method for an electronic settlement using a

keyboard having multiple card identification and charging functions for on-line electronic

commerce via an electronic commerce server which provides sales information of an

item and a financial settlement institute server which conducts financial settlement, the

method comprising *(see e.g. fig.1)*; a card-charging step for a user to charge a smart

card or an RF card using the keyboard (*see e.g. col. 7, lines 11-13 - a user via the*

secure keyboard can transfer money to and from the smart card) which includes a

control unit configured to transform the data read from the magnetic card, the smart

card or the RF card into a machine language code for transmission to the user PC and

to interpret a machine language code received from the user PC *(see e.g. col. 4, lines 10-17; fig. 1 ; see also fig. 2 and col. 3, lines 11-14)* through an access to an electronic cash management server via a web server interlocked with the user PC *(see e.g. col. 8, lines 26-42)*; a settlement approval step for the user to access the electronic commerce server via a web server through a line separate from the electronic cash management server for choosing an item and a settlement type and scan the charged card according to the chosen settlement type using the keyboard for getting a settlement approval *(see e.g. fig. 11; col. 7, lines 45-65)*; and a settlement confirmation step for the user to access the financial settlement institute server through a line separate from the electronic cash management server for an inquiry on the service particulars or the balance of the card and to get confirmation of the settlement *(see e.g. col. 8, lines 30-32)*.

Hughes does not specifically disclose an RF card identification/charging section to read/write an RF card.

However, Shino discloses an RF card identification/charging section to read/write an RF card *(RF cards and IC cards are sometimes used interchangeably-see e.g. col. 8, lines 8-13)*.

Therefore, it would have been obvious at the time of the invention to a person of ordinary skill in the art to modify Hughes, in view of Sherman et al., by implementing a RF card identification/charging section to read/write an RF card in the system, as taught by Shino, in order to make the system more convenient to users through the use of different types of devices.

Re claim 10, Hughes disclose a method for an electronic settlement wherein the settlement approval step comprises the steps of: choosing an item and a settlement type through an access to the electronic commerce server using the user PC *(see e.g. col. 10, lines 55-67)*; scanning the card according to chosen settlement type and transmitting the card information to the financial settlement institute server *(see e.g. col. 10, lines 20-27)*; and requesting a settlement approval to the card and confirming the settlement approval *(see e.g. col. 7, lines 40-45)*.

Re claim 11, Hughes disclose The method for an electronic settlement according to claim 8, wherein the settlement confirmation step comprises the steps of: getting a user authentication by scanning the card after an access to the financial settlement institute server using the user PC *(see e.g. col.6, lines 3-12)*; inquiring service particulars or a balance of the card in relation to the card-charging type *(see e.g. col. 10, lines 15-16, fig. 14)*; and confirming establishment of the settlement by the card after the inquiry and outputting a settlement confirmation receipt using a printer for receipt printing interlocked with the keyboard *(see e.g. col. 9, lines 41-51)*.

4.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes (5,809,143), in view of Shino (5,296,692), and in further view of Gustin et al. (2005/0035193 A1).

Re claim 9, Hughes disclose a method for an electronic settlement wherein the card-charging step comprises the steps of: getting a user authentication through an access to the electronic cash management server using the user PC *(see e.g. col. 10, lines 61-62)*; choosing a card-charging type *(see e.g. col. 10, lines 65-67)*; scanning the smart card or the RF card and transmitting the card information to the financial settlement institute server if a fund transfer is chosen as the card-charging type *(see e.g. col. 10, lines 15-34)*; requesting a fund transfer or a cash service in accordance the amount of money inputted by the user *(see e.g. col. 6, lines 22-33)*; charging the smart card or the RF card with the amount of money if the fund transfer or the cash service is approved *(see e.g. col. 5, lines 40-45)*.

Hughes, in view of Shino, does not specifically disclose scanning the magnetic card and transmitting the card information to the financial settlement institute server if a cash service is chosen as the card-charging type.

However, Gustin et al. disclose scanning the magnetic card and transmitting the card information to the financial settlement institute server if a cash service is chosen as the card-charging type (see e.g. paragraph 0164 - The cash check process is entered at a point 520 and as a result, the magnetic card reader 22 accepts the magnetic identification card in step 522 – the banking network is accessed).

Therefore, it would have been obvious to a person of ordinary skill in the art to include cash services and authentication in the system, as a standard practice in order to increase flexibility and at the same time, prevent fraud by verifying information on the magnetic card.

Response to Arguments

5.   Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection. Applicant argues that Hughes does not disclose a control unit configured to transform the data read from the magnetic card, the smart card or the RF card into a machine language code for transmission to the user PC and to interpret a machine language code received from the user PC. However, in column 3, lines 11-19, Hughes discloses that the keyboard can be used to input data to computer 12.   Furthermore, Hughes teaches data conversion via encryption and decryption.

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Le Roux et al. (6,216,955 B1), Utsunomiya (5,034,596), Kim et al. (WO 01/02934 A1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luna Champagne whose telephone number is (571) 272-7177. The examiner can normally be reached on Monday - Friday; 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Florian Zeender can be reached on (571) 272-6790. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F. Ryan Zeender/   Luna Champagne
Supervisory Patent Examiner, Art Unit 3627   Examiner
                                                             Art Unit 3627
December 4, 2007